

### III. Remarks

#### A. Status of the Application

Claims 1-8, 11-13, 23, 24, and 27-29 are presently pending in this application. No claims have been currently amended or cancelled. The claim listing is provided solely for the convenience of the Examiner.

#### B. Claim Rejections – 35 USC § 102

The Office Action indicated that claim 29 is rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,752,832 to Neumann (“Neumann”). This rejection is respectfully traversed for the following reasons.

The PTO provides in MPEP § 2131 that

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). ... “The identical invention must be shown in as complete detail as is contained in the ... claim.” Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). (emphasis added)

With respect to independent claim 29, Neumann at least fails to disclose an apparatus for installing a vertebral implant assembly including, “an engager device separate from the set of gears and fixedly secured to one of the gears for conjoint rotation therewith,” as recited in claim 29. As shown below in FIGS. 1, 10, and 12 reproduced from Neumann, the sleeve part 2, which the Office Action labels as the “engager,” does not conjointly rotate with one of the gears because rod 22 prevents such rotation of sleeve part 2. Specifically, Neumann discloses:

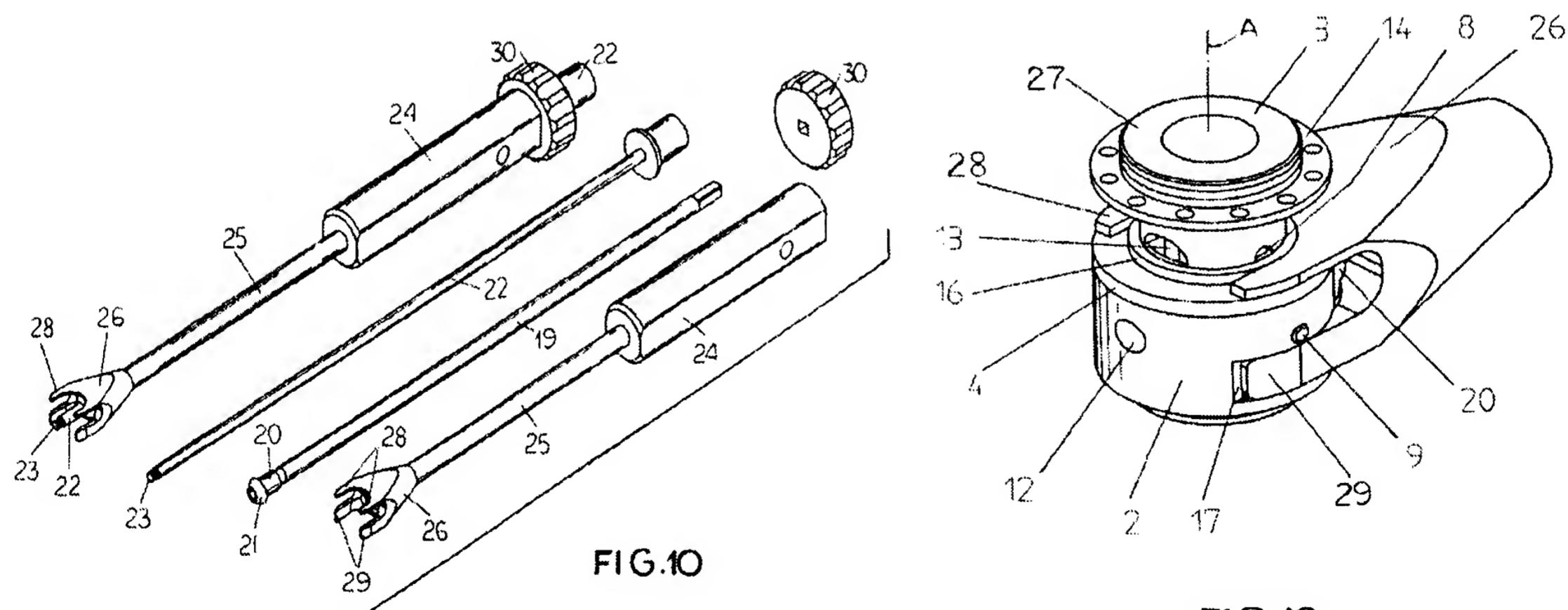
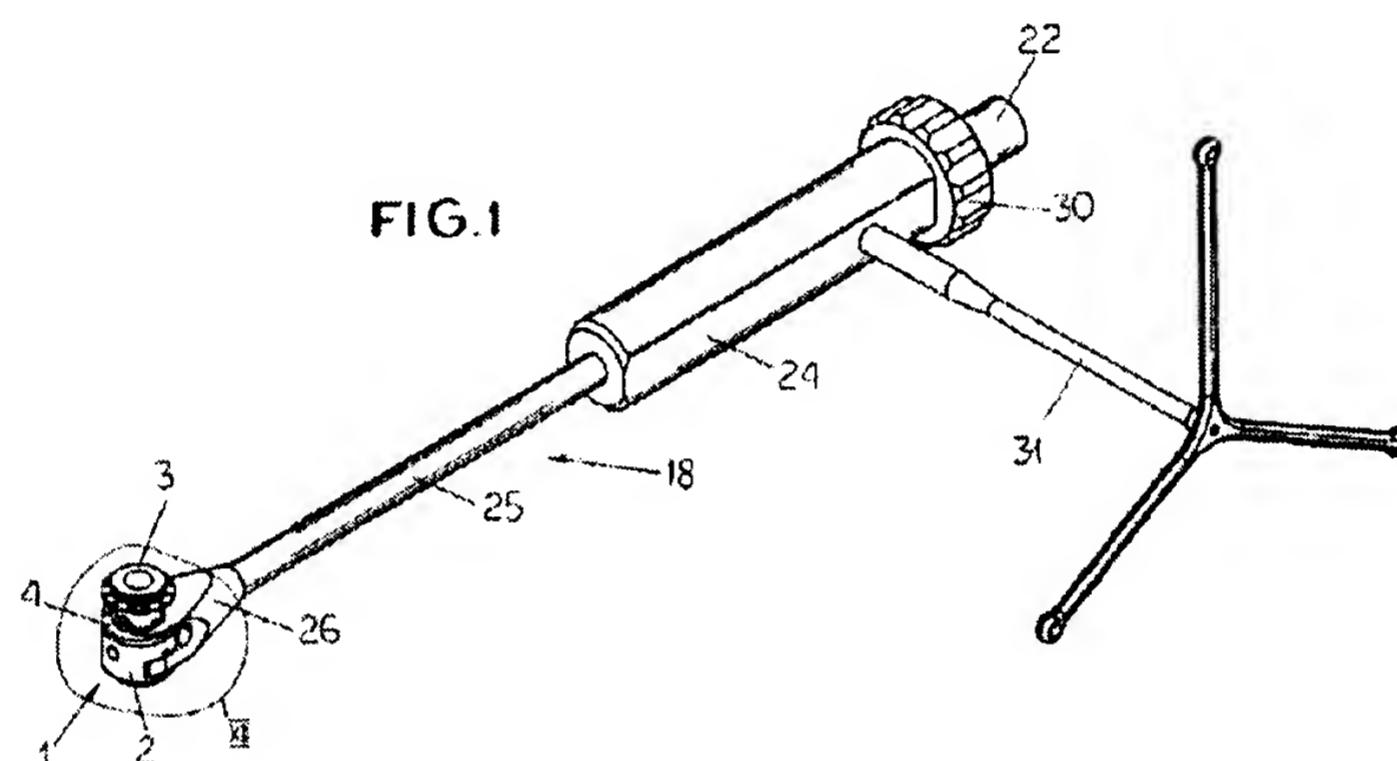
To set the implant 1 its parts are fitted together with the nut 4 screwed all the way up on the screwthread 8 of the core part 3 so that the assembly is of minimal axial dimension. It is then fitted to the forks 28 and 29 of the holder 26. This engages the gear 21 on the tubular shaft 19 with the teeth 7 of the nut 4. Then the rod 22 is passed through the slots 13 and its end 23 is screwed into the hole

12. This solidly locks the implant 1 to the inner end of the tool 18.

The insert 1 is then moved into position between the two vertebrae it is to brace and, if necessary distract. The wheel 30 is rotated to turn the shaft 19 and gear 21, thereby rotating the nut 4 so that it screws the core part 3 axially away from the sleeve part 2, axially extending the implant.

Once the implant 1 is solidly in place, the [rod 22] is unscrewed from the hole 12 and the tool 18 is pulled radially off the axis A off the implant 1, leaving the implant 1 in position.

Neumann, col. 4, ll. 19-35 (emphasis added).



Therefore, rod 22 is positioned through notch 10, wide slots 13, and screwed into hole 12 while wheel 30 is rotated to turn shaft 19 and gear 21. Consequently, sleeve part 2 does not

conjointly rotate with gear 21 because rod 22 is inserted through sleeve part 2 and inner core member 3 and subsequently screwed into sleeve part 2 while implant 1 is expanded axially. Further, no other element or component of Neumann meets all the features of the claimed engager. Thus, Neumann fails to disclose “an engager device separate from the set of gears and fixedly secured to one of the gears for conjoint rotation therewith,” as required by independent claim 29. For at least these reasons, claim 29 rejected on the basis of Neumann is in condition for allowance.

### C. Claim Rejections – 35 USC § 103

#### 1. *The Neumann and Mauldin Patents*

The Office Action indicated claims 1-8 and 11-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Neumann in view of U.S. Patent No. 5,732,992 to Mauldin (“Mauldin”). Applicant traverses the rejection of claims 1-8 and 11-13 on the grounds that the combination of Neumann and Mauldin is defective in establishing a *prima facie* case of obviousness with respect to these claims.

35 U.S.C. §103(a) provides, in part, that:

“A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time of the invention was made to a person having ordinary skill in the art . . .” (emphasis added)

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated.

With respect to independent claim 1, however, the combination of Neumann and Mauldin fails to teach or suggest an apparatus for installing a vertebral implant assembly including, “an engager device connected to the set of gears and adapted to rotate the tubular body when the axle is rotated.” As previously discussed above, the sleeve part 2, which the Office Action labels as the “engager,” does not rotate because rod 22 is positioned through notch 10, wide slots 13, and

screwed into hole 12 while implant 1 is expanded axially. Furthermore, Neumann discloses that wheel 30 is rotated to turn the shaft 19 and gear 21, which the Office Action labels as the “axle” and “gear” respectively, to rotate the nut 4, so that it screws the inner core part 3 axially away from the sleeve part 2. Therefore, Neumann fails to teach or suggest an engager device as recited in claim 1. Maudlin does not remedy this deficiency, because Mauldin entirely fails to teach or suggest any engager device meeting the recited features of claim 1. Mauldin is relied on only for a teaching of movable arc portions with substantially smooth surfaces, and that teaching is not relevant here.

Thus, the combination of Neumann and Mauldin fails to teach or suggest “an engager device connected to the set of gears and adapted to rotate the tubular body when the axle is rotated.” For at least these reasons, a *prima facie* case of obviousness has not been established with respect to independent claim 1.

Claims 2-8 and 11-13 depend from and further limit independent claim 1. Therefore, a *prima facie* case of obviousness has not been established with respect these dependent claims. Thus, the Applicant respectfully requests that the §103 rejection of claim 1-8 and 11-13 over Neumann in view of Mauldin be withdrawn.

## 2. *The Neumann and Zacouto Patents*

The Office Action indicated claims 23, 24, 27, and 28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Neumann in view of U.S. Patent No. 6,692,495 to Zacouto (“Zacouto”). Applicant traverses the rejection of claims 23, 24, 27, and 28 on the grounds that the combination of Neumann and Zacouto is defective in establishing a *prima facie* case of obviousness with respect to these claims.

With respect to independent claim 28, the combination of Neumann and Zacouto fails to teach or suggest an instrument for installing a vertebral implant including the feature of “wherein rotation of the axle is operative, via rotation of the circumferentially spaced teeth received in the tubular body side wall openings, to rotate the tubular body relative to the pair of endplates.” The Office Action does not identify circumferentially spaced teeth within Neumann or Zacouto.

Furthermore, with respect to Neumann, the projecting pins 9 of the sleeve part 2 cannot be considered the circumferentially spaced teeth because the sleeve part 2 does not rotate when wheel 30 is rotated to turn the shaft 19 and gear 21. Instead, when wheel 30 is rotated to turn the shaft 19 and gear 21, nut 4 is rotated to screw inner core part 3 axially away from sleeve part 2. Zacouto does not cure this deficiency because Zacouto also fails to teach or suggest the recited feature. Zacouto is relied on only for a teaching of two gears that are perpendicular to one another, and that teaching is not relevant here.

Thus, the combination of Neumann and Zacouto fails to teach or suggest “wherein rotation of the axle is operative, via rotation of the circumferentially spaced teeth received in the tubular body side wall openings, to rotate the tubular body relative to the pair of endplates.” For at least these reasons, a *prima facie* case of obviousness has not been established with respect to independent claim 28.

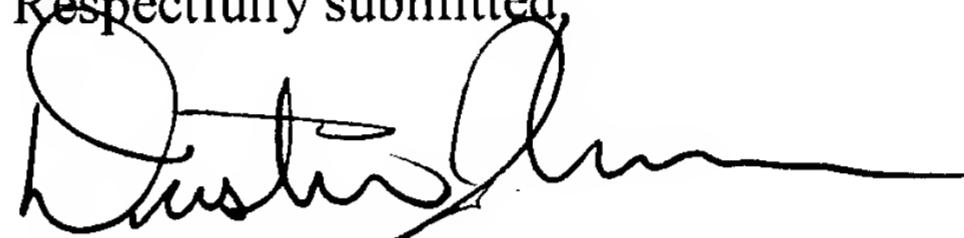
Claims 23, 24, and 27 depend from and further limit independent claim 28. Therefore, a *prima facie* case of obviousness has not been established with respect these dependent claims. Thus, the Applicant respectfully requests that the §103 rejection of claim 23, 24, 27, and 28 over Neumann in view of Zacouto be withdrawn.

**IV. Conclusion**

In view of the foregoing remarks, all of the claims currently pending in this application are now seen to be in a condition for allowance. A Notice of Allowance of Claims 1-8, 11-13, 23, 24, and 27-29 is therefore earnestly solicited.

The Examiner is hereby requested to telephone the undersigned attorney of record at 972/739-6969 if such would further expedite the prosecution of the instant application.

Respectfully submitted,



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